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(54) THERMOPLASTIC POLYMER SHEET AND ITS PRODUCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To produce a thermoplastic polymer sheet excellent in precision in thickness, not having die lines and sparingly causing a warp of the sheet.

SOLUTION: This thermoplastic polymer sheet is produced by the melt extrusion of a thermoplastic polymer through a T-die or a coathanger die so as to form a sheet-like product, by transferring it while retaining the surface temperature difference between the front surface and the back one of a molten sheet within 15°C and by subjecting the molten sheet to a cooling process to solidify it. The sheet is made of a thermoplastic polymer having  $\geq 150^{\circ}\text{C}$  glass transition temperature and has a sheet thickness of 150-1,000  $\mu\text{m}$ , an in-plane thickness tolerance (R max) of  $\leq 20 \mu\text{m}$ , the sheet surface roughness of  $\leq 0.1 \mu\text{m}$  and a sheet plane retardation of  $\leq 20 \text{ nm}$ .